Complete Summary

GUIDELINE TITLE

Prevention of secondary disease: opportunistic infections.

BIBLIOGRAPHIC SOURCE(S)

New York State Department of Health. Prevention of secondary disease: opportunistic infections. New York (NY): New York State Department of Health; 2006 Nov. 2 p.

GUIDELINE STATUS

This is the current release of the guideline.

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

- Human immunodeficiency virus (HIV) infection
- Opportunistic infections including:
  - *Pneumocystis jirovecii* pneumonia
  - *Mycobacterium avium* complex (MAC)
  - *Toxoplasma* encephalitis (TE)
  - Cytomegalovirus (CMV) infection
  - *Cryptococcus neoformans* infection
  - Candidiasis

GUIDELINE CATEGORY

Prevention

CLINICAL SPECIALTY

Allergy and Immunology
Family Practice
Infectious Diseases
Internal Medicine
Preventive Medicine

INTENDED USERS

Advanced Practice Nurses
Health Care Providers
Nurses
Physician Assistants
Physicians
Public Health Departments

GUIDELINE OBJECTIVE(S)

To provide guidelines for opportunistic infection prophylaxis in human immunodeficiency virus (HIV)-infected patients

TARGET POPULATION

Human immunodeficiency virus (HIV)-infected patients

INTERVENTIONS AND PRACTICES CONSIDERED

1. Prophylaxis of opportunistic infections (trimethoprim-sulfamethoxazole [TMT-SMX]; azithromycin; clarithromycin; dapsone; atovacone; a combination of dapsone, pyrimethamine, and leucovorin; rifabutin)
2. Discontinuation of primary and secondary prophylaxis when indicated

MAJOR OUTCOMES CONSIDERED

Not stated

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Hand-searches of Published Literature (Secondary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Not stated

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Expert Consensus (Committee)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

METHODS USED TO ANALYZE THE EVIDENCE

Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

AIDS Institute clinical guidelines are developed by distinguished committees of clinicians and others with extensive experience providing care to people with HIV infection. Committees* meet regularly to assess current recommendations and to write and update guidelines in accordance with newly emerging clinical and research developments.

The Committees* rely on evidence to the extent possible in formulating recommendations. When data from randomized clinical trials are not available, Committees rely on developing guidelines based on consensus, balancing the use of new information with sound clinical judgment that results in recommendations that are in the best interest of patients.

* Current committees include:

- Medical Care Criteria Committee
- Committee for the Care of Children and Adolescents with HIV Infection
- Dental Standards of Care Committee
- Mental Health Committee
- Women's Health Committee
- Substance Use Committee
- Physician's Prevention Advisory Committee
- Pharmacy Committee

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

All guidelines developed by the Committee are externally peer reviewed by at least two experts in that particular area of patient care, which ensures depth and quality of the guidelines.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Clinicians should initiate prophylaxis for specific opportunistic infections as indicated in Table 1 below and discontinue prophylaxis as indicated in Table 2 below.

Table 1 Initiation of Primary Opportunistic Infection (OI) Prophylaxis

Pathogen	Initiate Prophylaxis	Preferred Agent	Alternative Agents
Pneumocystis jirovecii pneumonia*	CD4 <200 cells/mm^3 or <14%, or a history of oropharyngeal candidiasis	Trimethoprim-Sulfamethoxazole (TMP/SMX) every day (qd) or 3x/wk	• Dapsone** • Dapsone** + pyrimethamine + leucovorin • Atovaquone • Aerosolized pentamidine
Mycobacterium avium complex (MAC)	CD4 <50 cells/mm^3	Azithromycin Clarithromycin	• Rifabutin • Azithromycin + rifabutin
Toxoplasma encephalitis (TE)	CD4 <100 cells/mm^3 *and* Positive serology for *Toxoplasma* (immunoglobulin G [IgG]+)	TMP/SMX qd	• Dapsone** + pyrimethamine + leucovorin • Atovaquone with or without pyrimethamine + leucovorin
Cytomegalovirus (CMV)	Not routinely recommended	NA	NA
Cryptococcus	Not routinely	NA	NA

Pathogen	Initiate Prophylaxis	Preferred Agent	Alternative Agents
neoformans	recommended		
Candida sp.	Not routinely recommended	NA	NA

*Formerly *Pneumocystis carinii*.
**Screen for G6PD deficiency before initiating dapsone.

For more information on management of opportunistic infections, refer to the New York State Health Department guideline, Infectious Complications Associated With HIV Infection guidelines developed by the Medical Care Criteria Committee.

Table 2 Discontinuation of OI Prophylaxis

Pathogen	Discontinuation of Primary Prophylaxis	Discontinuation of Secondary Prophylaxis
Pneumocystis jirovecii pneumonia (PCP)	Patient receiving highly active antiretroviral therapy (HAART) with increase in CD4 count to >200 cells/mm^3 for $\geq$3 months	• CD4 count >200 cells/mm^3 for $\geq$3 months in response to HAART • Adequate viral suppression • If PCP occurred with CD4 >200 cells/mm^3, prophylaxis should be maintained
Toxoplasma encephalitis (TE)*	Patient receiving HAART with increase in CD4 count to >200 cells/mm^3 for $\geq$3 months	• CD4 count >200 cells/mm^3 for $\geq$6 months in response to HAART • Completed initial therapy • Asymptomatic for TE
Mycobacterium avium complex (MAC)	CD4 count increase to >100 cells/mm^3 for $\geq$3 months in response to HAART	• CD4 count increase to >100 cells/mm^3 for $\geq$6 months in response to HAART • Completed at least 12 months of treatment for disseminated MAC** • Asymptomatic for MAC
Cryptococcosis	NA	• CD4 count increase to >100 to 200 cells/mm^3 for $\geq$6 months • Completed initial therapy • Asymptomatic for cryptococcosis
Cytomegalovirus (CMV)	NA	• CD4 >100 to 150 cells/mm^3 for $\geq$6 months

Pathogen	Discontinuation of Primary Prophylaxis	Discontinuation of Secondary Prophylaxis
		• No evidence of active disease • Regular ophthalmic examination

*HIV-infected adults or adolescents with a history of toxoplasmosis in childhood should be administered lifelong prophylaxis to prevent recurrence.
**Obtaining blood cultures or bone marrow cultures may be advisable to ascertain disease activity.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is not specifically stated for each recommendation.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Appropriate prophylaxis for opportunistic infections in human immunodeficiency virus (HIV)-infected patients

POTENTIAL HARMS

Not stated

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

The AIDS Institute's Office of the Medical Director directly oversees the development, publication, dissemination and implementation of clinical practice guidelines, in collaboration with The Johns Hopkins University, Division of Infectious Diseases. These guidelines address the medical management of adults, adolescents and children with HIV infection; primary and secondary prevention in medical settings; and include informational brochures for care providers and the public.

The HIV Clinical Guidelines Program works with other programs in the AIDS Institute to promote adoption of guidelines. Clinicians, for example, are targeted through the Clinical Education Initiative (CEI) and the AIDS Education and

Training Centers (AETC). The CEI provides tailored educational programming on site for health care providers on important topics in HIV care, including those addressed by the HIV Clinical Guidelines Program. The AETC provides conferences, grand rounds and other programs that cover topics contained in AIDS Institute guidelines.

Support service providers are targeted through the HIV Education and Training initiative which provides training on important HIV topics to non-physician health and human services providers. Education is carried out across the State as well as through video conferencing and audio conferencing.

The HIV Clinical Guidelines Program also works in a coordinated manner with the HIV Quality of Care Program to promote implementation of HIV guidelines in New York State. By developing quality indicators based on the guidelines, the AIDS Institute has created a mechanism for measurement of performance that allows providers and consumers to know to what extent specific guidelines have been implemented.

Finally, best practices booklets are developed through the HIV Clinical Guidelines Program. These contain practical solutions to common problems related to access, delivery or coordination of care, in an effort to ensure that HIV guidelines are implemented and that patients receive the highest level of HIV care possible.

IMPLEMENTATION TOOLS

Personal Digital Assistant (PDA) Downloads

For information about availability, see the "Availability of Companion Documents" and "Patient Resources" fields below.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Living with Illness
Staying Healthy

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

New York State Department of Health. Prevention of secondary disease: opportunistic infections. New York (NY): New York State Department of Health; 2006 Nov. 2 p.

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2006 Dec

GUIDELINE DEVELOPER(S)

New York State Department of Health - State/Local Government Agency [U.S.]

SOURCE(S) OF FUNDING

New York State Department of Health

GUIDELINE COMMITTEE

Not stated

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Not stated

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: Available from the New York State Department of Health AIDS Institute Web site.

AVAILABILITY OF COMPANION DOCUMENTS

This guideline is available as a Personal Digital Assistant (PDA) download from the New York State Department of Health AIDS Institute Web site.

PATIENT RESOURCES

None available

NGC STATUS

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